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Angus O. Dougherty

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Qwest Communications International Inc.
1801 California Street, # 900
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EXAMINER

MILLS, DONALD L

ART UNIT

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2462

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/605,696	Applicant(s) DOUGHERTY ET AL.	
	Examiner DONALD L. MILLS	Art Unit 2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 47-65, 67 and 68 are rejected under 35 U.S.C. 102(e) as being anticipated by Nguyen et al. (US 20010006509 A1), hereinafter referred to as Nguyen.

Regarding claim 47, Nguyen discloses a frequency division duplexing system, which accommodates symmetric and asymmetric channels, which comprises:

At least one distribution point comprising a host digital terminal distribution center for converting the high-speed packetized information to an optical format;

A distributed routing network adapted to receive the high-speed packetized information from the host digital terminal distribution center;

At least one access point comprising an optical network unit adapted to receive the high-speed packetized information from the distributed routing network and convert the high-speed packetized information from the optical format to a second format; a network interface device adapted to receive the high-speed packetized information from the optical network unit and forward the high-speed packetized information in the second format to at least one of the plurality of subscriber units (Note, the Examiner interprets the claim as a traditional prior art system of a VDSL system connected to an ONU. Referring to Figures 2 and 3, a network connection path

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from the connection 103 and central office 75 to station sets, such as station set S2, illustrated in FIG. 2. In a VDSL system implementation of the present invention, the system may employ an optical fiber 120 to provide a communications path between the central office 75 and an optical network unit (ONU) 122. One or more optical fibers may employed to bring communications to within a relatively short range of a group of subscribers, where short range means a range that permits high speed data to be transmitted over conventional two-wire pairs within a cable.

Signals are translated between the optical and two-wire media within the optical network unit 122. Under certain circumstances, for example, when a relatively large number of subscribers are located within a short range of the central office, that is no farther than the longest reach provided for by the system, the optical fiber 120 and optical network unit 122 may be eliminated. In implementations where the optical fiber 120 and optical network unit are employed, besides translation from optical to two-wire media, two-wire transmitters and receivers are employed, preferably within the optical network unit 122, to transmit signals to and receive signals from the station sets S2, S3 . . . Sn, which are connected to the optical network unit 122 through drop cables DC2, DC3, . . . , DCn and a distribution cable 124. Transmitters and receivers at either end of the distribution cable 124 employ frequency division duplexing, with the channels defined according to those set forth in FIG. 1. The distribution cable includes binder groups which typically consist of twelve to twenty five two-wire twisted pairs and the potential for crosstalk is greatest within any of these binder groups, as opposed to inter-binder group crosstalk. See paragraphs 0032-0033.)

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Regarding claim 48, Nguyen discloses *wherein the second optical format is compatible with copper wiring* (Referring to Figures 2 and 3, the VDSL network connected to the ONU is compatible with copper wiring. See paragraphs 0032-0033.)

Regarding claim 49, Nguyen discloses *wherein the second optical format is compatible with coaxial cable* (Referring to Figures 2 and 3, the VDSL network connected to the ONU is compatible with coaxial cable. See paragraphs 0032-0033.)

Regarding claim 50, Nguyen discloses *wherein the high-speed packetized information is provided through a VDSL service* (Referring to Figures 2 and 3, the VDSL network connected to the ONU. See paragraphs 0032-0033.)

Regarding claim 51, Nguyen discloses *wherein the high-speed packetized information is provided through a fiber optic service* (Referring to Figures 2 and 3, the VDSL network connected to the ONU is compatible with fiber optic service. See paragraphs 0032-0033.)

Regarding claim 52, Nguyen discloses *wherein the host digital terminal distribution center provides a plurality of video channels for distribution to the plurality of subscriber units* (Referring to Figures 2 and 3, video data service is supported via channels for subscribers. See paragraph 0031-0032.)

Regarding claim 53, Nguyen discloses *wherein at least one of the plurality of subscriber units comprises is-a mobile device in communication with the at least one access point the distributed routing network through a wireless connection* (Referring to Figures 2 and 3, although illustrating a wireline network a wireless network application is also disclosed. See paragraphs 0032-033 and 0037.)

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Regarding claim 54, Nguyen discloses *wherein at least one of the subscriber units comprises-is a mobile device in communication with the distributed routing network interface device through a land line wired connection* (Referring to Figures 2 and 3, although illustrating a wireline network a wireless network application is also disclosed. See paragraphs 0032-033 and 0037.)

Regarding claim 55, Nguyen discloses *wherein the network interface device is a set-top box* (Referring to Figures 2-4, the ONU (set-top box) comprises an encoder/decoder in a device for communication with the network. See paragraph 0034.)

Regarding claim 56, Nguyen discloses *wherein the network interface device is a gateway* (Referring to Figures 2-4, the ONU (gateway) comprises an encoder/decoder in a device for communication with the network. See paragraph 0034.)

Regarding claim 57, Nguyen discloses *wherein the network interface device is a decoder* (Referring to Figures 2-4, the ONU comprises an encoder/decoder in a device for communication with the network. See paragraph 0034.)

Regarding claims 58 and 62, Nguyen discloses a frequency division duplexing system, which accommodates symmetric and asymmetric channels, which comprises:

Storing data at a distribution point comprising a host digital terminal distribution center (Referring to Figure 2, the central office comprises host computer which provides a video jukebox (stores data at a distribution point comprising a host digital terminal distribution center). See paragraph 0031); *Converting the data into a plurality of high-speed information packets; Converting the plurality of high speed information packets into an optical format; forwarding at least one of the plurality of high-speed information packets from the host digital terminal*

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distribution center to a distributed routing network, forwarding the at least one of the plurality of high-speed information packets from the distributed routing network to an access point comprising an optical network unit; converting the at least one of the plurality of high-speed information packets from the optical format to a second format; forwarding the at least one of the plurality of high-speed information packets from the optical format to a second format; forwarding the at least one of the plurality of high-speed information packets in the second format from a network interface device to the at least one of a plurality of subscriber units (Note, the Examiner interprets the claim as a traditional prior art system of a VDSL system connected to an ONU. Referring to Figures 2 and 3, a network connection path from the connection 103 and central office 75 to station sets, such as station set S2, illustrated in FIG. 2. In a VDSL system implementation of the present invention, the system may employ an optical fiber 120 to provide a communications path between the central office 75 and an optical network unit (ONU) 122. One or more optical fibers may employed to bring communications to within a relatively short range of a group of subscribers, where short range means a range that permits high speed data to be transmitted over conventional two-wire pairs within a cable. Signals are translated between the optical and two-wire media within the optical network unit 122. Under certain circumstances, for example, when a relatively large number of subscribers are located within a short range of the central office, that is no farther than the longest reach provided for by the system, the optical fiber 120 and optical network unit 122 may be eliminated. In implementations where the optical fiber 120 and optical network unit are employed, besides translation from optical to two-wire media, two-wire transmitters and receivers are employed, preferably within the optical network unit 122, to transmit signals to and receive signals from the station sets S2,

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S3 . . . Sn, which are connected to the optical network unit 122 through drop cables DC2, DC3, . . . , DCn and a distribution cable 124. Transmitters and receivers at either end of the distribution cable 124 employ frequency division duplexing, with the channels defined according to those set forth in FIG. 1. The distribution cable includes binder groups which typically consist of twelve to twenty five two-wire twisted pairs and the potential for crosstalk is greatest within any of these binder groups, as opposed to inter-binder group crosstalk. See paragraphs 0032-0033.)

Regarding claim 59, Nguyen discloses *wherein the data stored on the host digital terminal video distribution center comprises a plurality of information channels* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox providing a number of channels for distribution. See paragraph 0031)

Regarding claim 60, Nguyen discloses *wherein the host digital terminal video distribution center is adapted to receive a request from at least one of the plurality of subscriber units to access one of the plurality of information channels* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which provides video data via channels to subscribers. See paragraph 0031)

Regarding claim 61, Nguyen discloses *wherein the host digital terminal video distribution center is adapted to: respond to the request from the at least one of the plurality of subscriber units to access one of the plurality of information channels; and deliver the one of the plurality of information channels to the one of the plurality of subscriber units* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service. See paragraph 0031.)

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Regarding claim 63, Nguyen discloses *processing a request at the at least one of a plurality of subscriber units to access the data stored at the host digital terminal distribution center; and determining if the data stored at the host digital terminal distribution center is available for distribution* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service. See paragraph 0031.)

Regarding claim 64, Nguyen discloses *wherein processing a request at the at least one of a plurality of subscriber units to access the data stored at the host digital terminal distribution center comprises determining that the requesting at least one of a plurality of subscriber units is within the coverage area of the host digital terminal distribution center* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service and servicing subscribers within its subscription range. See paragraph 0031)

Regarding claim 65, Nguyen discloses *wherein processing a request at the at least one of a plurality of subscriber units to access the data stored at the host digital terminal distribution center comprises receiving a message from the at least one of a plurality of subscriber units* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service. See paragraph 0031.)

Regarding claim 67, Nguyen discloses *determining that the at least one of the plurality of subscriber units is no longer accessing the data; terminating transmission of the data; and noting that the at least one of the subscriber units is no longer receiving the data* (Referring to

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Figure 2, the central office comprises host computer which provides a video jukebox, which delivers video data to requesting subscribers via channels per an on-demand service and service is terminated when the subscriber no longer accesses the data, by definition of video jukebox.

See paragraph 0031)

Regarding claim 68, Nguyen discloses *at least one of the host digital terminal distribution center and optical network unit comprises a video distribution center, the video distribution center adapted to receive and relay requests between a video supplier and at least one of a customer gateway and one of the plurality of subscriber units* (Referring to Figure 2, the central office comprises host computer which provides a video jukebox. See paragraph 0031.)

. Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen (US 20010006509 A1) in view of Saito et al. (US 6,751,221 B1), in view of Saito.

Regarding claim 66 as explained in the rejection of claim 62, Nguyen discloses all of the claim limitations of claim 62 (parent claim).

Nguyen does not disclose *transmitting a dummy address as the destination for the data*.

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Saito discloses a data transmitting node and network inter-connection node suitable for a home network environment, in which a dummy value is entered for the unresolved destination address (See column 29, lines 5-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dummy value of Saito in the system of Nguyen. One of ordinary skill in the art at the time of the invention would have been motivated to do so to discard unwanted frames as taught by Saito (See column 29, lines 9-21).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONALD L. MILLS whose telephone number is (571)272-3094. The examiner can normally be reached on 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald L Mills/
Primary Examiner, Art Unit 2462